

```

go athena
mesh space.mult=1.0
x.mesh loc=0.00 spac=0.10
x.mesh loc=5 spac=0.10
y.mesh loc=0.00 spac=0.1
y.mesh loc=3 spac=0.1
y.mesh loc=8 spac=0.2
y.mesh loc=9 spac=0.1
init silicon c.silicon=1.0e14 orientation=100
relax x.min=0.00 x.max=5.00 y.min=3.00 y.max=8.00 dir.x=t dir.y=t
region number=1 x.min=0 x.max=5 y.min=1 y.max=8 material=Silicon
region number=6 x.min=0 x.max=5 y.min=8 y.max=8.5 material=Silicon
region number=3 x.min=0 x.max=5 y.min=8.5 y.max=10 material=aluminium
region number=4 x.min=2.2 x.max=2.6 y.min=0 y.max=1 material=aluminium
region number=5 x.min=3.2 x.max=3.6 y.min=0 y.max=1 material=aluminium
region number=7 x.min=2 x.max=3 y.min=1 y.max=2 material=Silicon
# #1=anode
electrode name=anode1 number=1 x.min=2.2 x.max=2.6 y.min=0 y.max=1
# 2=cathode

electrode name=cathode1 number=2 x.min=3.2 x.max=3.6 y.min=0 y.max=1
electrode name=cathode2 number=3 x.min=0 x.max=5 y.min=8.5 y.max=9
doping uniform conc=1e+15 p.type direction=y region=1
doping uniform conc=1e+15 p.type direction=y region=6
doping uniform conc=1e+19 p.type direction=y region=7
doping gaussian junction=2.3 peak=2 conc=1e+17 xy.rat=0.01 n.type direction=y x.left=1\
x.right=4 region=1
region number=1 x.min=0 x.max=5 y.min=1 y.max=8 material=Silicon
region number=6 x.min=0 x.max=5 y.min=8 y.max=8.5 material=Silicon
region number=3 x.min=0 x.max=5 y.min=8.5 y.max=10 material=aluminium
region number=4 x.min=2.2 x.max=2.6 y.min=0 y.max=1 material=aluminium
region number=5 x.min=3.2 x.max=3.6 y.min=0 y.max=1 material=aluminium
region number=7 x.min=2 x.max=3 y.min=1 y.max=2 material=Silicon
doping uniform conc=1e+15 p.type direction=y region=1

contact name=anode1 neutral num=1
contact name=cathode1 neutral num=2
contact name=cathode2 neutral num=3

struct inf=gaotest1.str
model srh conmob fldmob print temperature=300
solve vanode=0
solve vcathode=0.6
log outf=gaotest.str
solve name=cathode vcathode=0 vfinal=1 vstep=50
solve init

```